DOCUMENT RESUME

ED 093 120 EC 062 241

AUTHOR Larsh, Edward B.; And Others
TITLE Gifted and Talented Preschool Programs: Why Not in Head Start?
INSTITUTION Office of Education (DHEW), Denver, Colo. Regional Office 8.
PUB DATE [74]
NOTE 103p.

EDRS PRICE MF-$0.75 HC-$5.40 PLUS POSTAGE
DESCRIPTORS *Early Childhood Education; *Exceptional Child Education; *Gifted; Guidelines; *Program Descriptions; *Program Development; Program Evaluation; Student Characteristics

ABSTRACT

Described are four preschool programs for gifted children at the preschool level, and discussed are components of a good preschool program for the gifted and talented. It is believed that programs for the gifted can easily be included in a Head Start program. Reported are the results of on-site visits to two programs in Utah which resulted in recommendations such as the importance of inservice training and the need for curriculum based on development of problem solving skills. Briefly described are two other programs which stress skills such as creativity and decision making. Meetings with parents are reported to have shown agreement that the gifted child needs an enriched program but disagreement concerning whether gifted children should be in segregated or integrated settings. A good preschool program for the gifted and talented is seen to require identification of comprehensive objectives, provision for pupil differences, appropriate instructional materials and physical facilities, a flexible schedule, qualified staff, and a curriculum focus on the development of thinking skills. Emphasized in the section on the characteristics of preschool children are the multiplicity of potentials in children at the preschool age and the need for a program which provides a multiplicity of opportunities for free expression. (DB)

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GIFTED AND TALENTED PRESCHOOL PROGRAMS

WHY NOT IN HEAD START?

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FORWARD

Occasionally in the labyrinth of the halls of bureaucracy, people representing agencies or special programs get together and discover that by using each other, a synergism can be created whereby a product can evolve that, in itself, is something worth more than the separate parts.

This phenomenon happens rarely, most often accidentally, but on occasion is planned by a few gifted and talented government officials.

The newly formed Office of Human Development, in the Department of HEW, inherited as one of its components the Office of Child Development, which has responsibility for the Head Start Programs.

Mr. Edward Okazaki, the new Director of the Office of Human Development in Region VIII, charged his Deputy, Mr. Paul Mahoney, with doing an innovative evaluation of the Head Start Programs. Mr. Mahoney approached School Systems, USOE Region VIII, and a plan was born; instead of an evaluation of what is, it was decided to do a feasibility study of what could be.

Two of the Head Start Programs in the Salt Lake area were selected: Matheson Head Start, directed by Ms. Deloras Edwards; and Granite Head Start, directed by Mr. Ken McClellan. These programs, in existence for eight years, were organized through the Salt Lake Community Action Program (CAP), coordinated by Mrs. Bernice Bernstein. They are grantee agencies for the program and delegate the operations to the programs in the districts and are involved in seeing that Federal guidelines and policies are adhered to and the program is coordinated.

A team of professionals was formed with the intention of writing a position paper addressing the issue of meeting the needs of the gifted and talented children in preschools and directly or indirectly helping Head Start projects in Region VIII assess themselves regarding programs for exceptional children.

Decisions were made, considering the time constraint, as to the best possible procedure. It was arbitrarily decided that the team should concentrate on the centralized program at Matheson and the decentralized program of the Granite School District. The reason for this decision was that any recommendations would be transportable since programs in other geographic areas would fit one model or

the other. This meant, however, that the Head Start Day Care project in Salt Lake City, directed by Mr. Edward Owens, would be neglected. The choice was one of logistics. It is a well known fact that this Day Care project is an exemplary one with national recognition.

The charge was a feasibility study in introducing Gifted Programs in Head Start projects; it was not an evaluation of the three projects. Consequently, emphasis was placed on the study, rather than on distributing the time on a parity basis among the projects. It should be noted, however, that if the study should lead to State or Federal funding, all three projects should be considered as deserving.

Ed Larsh
Team Leader

INTRODUCTION

One of the tragedies of our time is that, while we cry out with indignation against the abuses and waste of our natural resources, we at the same time fail to recognize that one of our most valuable national resources -- our gifted and talented individuals -- are being neglected. Too often they are being forced into a massive mold of mediocrity. As educator Ruth Strang has stated, "Democracy requires diversity rather than uniformity. Valuable individual differences need to be cultivated . . . Few people object to making special provisions for the athlete or the handicapped. Yet gifted children may become handicapped if appropriate provision is not made for them."[1]

We must find and educate all our potential leaders, giving them the freedom to learn, and thus encouraging the fulfillment of individual potential. In this era of complex and critical issues, the need for leadership is obvious, and the implications of programs aimed at developing our brightest, most talented and most skilled citizens are momentous.

There is a huge reservoir of undiscovered talent and leadership in the minorities and lower income communities which needs to be searched out and developed. E. Paul

Torrance, a researcher in this field, has stated that the creativity of the disadvantaged will play a crucial role in the future progress of the United States. His research has indicated that "if one uses only an intelligence test and therefore identifies the upper twenty percent as gifted, he would miss seventy percent of those who would fall into the top twenty percent on tests of creative thinking ability."[2]

The 1971 Report to Congress from the U.S. Commissioner of Education stated, "Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas, singly or in combination: general intellectual ability, specific academic aptitude; creative or productive thinking; leadership ability; visual and performing arts, and psychomotor ability."[3]

The importance and the magnitude of the task ahead are revealed in the study done by the Office of Education:

-- Fewer than 4% of the country's 2 million gifted and talented children receive special programs commensurate with their needs.

-- In only 10 states is there a full-time person in the State Department of Education responsible

for gifted and talented education. (75% of the gifted children being served are in these states.)

-- 57% of school administrators surveyed said they had no gifted and talented children in their schools. (A statistical impossibility.)

-- Hostility is directed toward the children by teachers, counselors, and administrators.

-- There is a lack of trained staff; only 12 colleges offer graduate training programs in education of the gifted and talented.

-- Very few resource centers exist for aid in developing programs.[4]

Even though these facts are discouraging, efforts are being made to stimulate awareness of the need for a new emphasis on programs for the gifted and talented. The National Defense Education Act of 1958 was aimed primarily at improving instruction in the sciences and later was extended to other subjects. Later legislation expressed concern for developing programs for the "disadvantaged" and handicapped child. The present thrust is aimed toward developing the talents of a broader segment of the population.

The previously mentioned study reported that "by conservative estimate 3 to 5 percent of our school children exhibit outstanding abilities at an early age . . . Such traits are found in individuals from all backgrounds and levels of society: rich and poor, urban and rural, black, white, yellow and red."[5] Thus, it is evident that special categories of children -- disadvantaged, handicapped, and gifted -- are not mutually exclusive,and sizable numbers of gifted and talented youngsters are to be found among those already identified as disadvantaged and/or handicapped. The challenge today is the identification and nurturance of these children's attributes. Research studies in child development continue to point up the early years as the prime learning period and as the root years in concept formation, language, and creativity. Therefore, a logical place of emphasis is in early childhood programs, such as Head Start.

Head Start, now in its tenth year, appears to be a relatively permanent part of early childhood education. Legislation soon to be introduced in Congress will extend the Economic Opportunity Act, the original source of Head Start funding, which expires on June 30, 1974.

Head Start philosophy itself is in accordance with our recommendations to institute gifted and talented programs. Although Head Start was built on a "deficit model," one which sought to compensate for the children's deficiencies, by they health, nutritional, social, emotional, intellectual, nevertheless, the total child was considered. It will not take a great shift in thinking to place more emphasis on nurturing talents while still overcoming deficits.

In addition, three other crucial components of programs for gifted and talented youngsters are integral to Head Start Programs. These are: the parent involvement component, the coordination of relevant community agencies in providing services to children and families, and the staff development component.

The Regional Office of Child Development in HEW, Region VIII, had identified three Utah Head Start projects as being of high quality. In addition, staff at these projects had expressed an interest in and readiness for developing programs for gifted and talented children.

The three-day on-site visit included meetings with the Head Start staff at Matheson Head Start, which is a centralized program for the Salt Lake District, and staff at other decentralized Head Start Programs in Salt Lake Valley. In addition to the Head Start classrooms, a day care center, kindergarten rooms, and an exemplary elementary school program were visited. The team also met with parents, kindergarten teachers, school superintendents, the State Director of the Office of Child Development, the Director of Elementary Education (Granite School District), and the State Training Officer for Head Start.

MATHESON SCHOOL -- SALT LAKE CITY

Matheson School is unique in that all 360 Head Start children are in one school. The school building was given to the Head Start Program because of a demographic accident, resulting from a housing subdivision where the school population decreased to the extent that the school building was no longer needed.

Matheson, like all the Salt Lake Valley Head Start projects, uses the Denver Developmental Screening Test and the Vineland Social Maturity Scale for screening the children. However, neither screening device is appropriate for identifying gifted and talented children.

"The Denver Developmental Screening Test (DDST) was designed and standardized to meet the need of having a simple useful tool to aid in the early discovery of children with developmental problems."[6] The Vineland Social Maturity Scale is a maturational schedule designed to measure successive stages of social competence from infancy to adult life.

The staff at Matheson, including the aides, parents, and teachers, reflected the competence of the principal, Ms. Dee Edwards.

The analysis of the educational process and request for recommendations could only be done by a staff which is cognizant that they are doing a good job and wish to do a better one.

TRIAL PROJECTS FOR THE GIFTED

The administrator and teaching staff of Matheson School should be commended for recognizing that many of their students had potential which was not being adequately developed in the regular Head Start classroom. Having recognized this need, three enthusiastic teachers took it upon themselves to devise two separate programs which would challenge the bright children and allow them to advance at a faster rate. One program (Project A) was implemented in the morning and the other (Project B) in the afternoon.

Project A

The children placed in the Project A program were identified as the upper fifteen percent, using the Denver Developmental Screening Test (DDST) and the Vineland Social Maturity Scale. This determination was made when a child passed all of the items on the Denver Developmental at his age level or beyond, and when the Vineland indicated the child was at least six months over his social maturity age. It was agreed that those who scored highest from two morning classes would all meet in the male teacher's class for one hour, twice a week, while the female teacher would take the

regular class. The teachers coordinated lesson planning so that they were both working on similar activities. Cognitive goals were set up to teach the children how to print their first and last names, addresses, and dates of birth. The teacher of the gifted class reported significant progress with his students. However, soon many children began exhibiting signs of tension. Some students from each class cried when it came time to switch. In addition, students in the gifted group were reported to become very competitive. Both classes started out approximately equal in size, but one ended up much larger as children from the advanced class were returned to the regular classroom. After four weeks, the project was terminated. The teachers felt that the effort had failed because (1) the homogeneous grouping put competitive pressures on the children; (2) the students identified very strongly with "their" teacher and didn't like being removed from a comfortable, secure environment; (3) they felt the male-female roles may have been contributory. In addition, they recognized the need for technical assistance for implementing an alternate program for the gifted.

Project B

The children in Project B, six children in a self-contained, afternoon class, were identified as high achievers through the DDST and the Vineland Social Maturity Scale. The classroom teacher also observed the children in class and administered a preschool inventory; in general, her observations seemed to confirm the test results.

All six children had indicated an interest in and readiness for more frequent activities and experiences in the area of reading-readiness and math-readiness. Meeting in a group one day a week for approximately 30-45 minutes, the children worked on counting, auditory and visual recognition of consonant sounds, sets (1-10), understanding comparatives and visual memory skills. The teacher felt the project has been successful and is continuing the sessions.

In analyzing the projects, several points should be noted relative to both experiments:

1. All of the teachers were sincere and enthusiastic about the need for a special program for the gifted and talented.

2. Gifted children were selected through developmental scales which do not identify talents.

3. Both attempts at enriching the curriculum for the gifted were centered around cognitive learning.

4. In general, the teaching methods emphasized repetition, drill, and memorization.

Project A:

1. The teaching styles of the two morning teachers differed greatly, one being fairly structured, while the other normally exhibited a fairly unstructured approach.

2. The morning project was conducted for two hours per week (including shifting classes and "getting settled") for only four weeks.

3. The teachers themselves decided what the lessons were to be and when to terminate the project. The children had no input.

4. Children were "weeded out" of the morning group when they didn't succeed.

Project B:

1. The students in the second group stayed with their regular teacher, but left their peers.

2. The activities of the afternoon class were more varied from session to session.

The above comments are based on observations, with no attempt at evaluation. Given the limited amount of information regarding the projects, it is impossible to state definitive reasons for Project A's apparent failure.

The competencies of the staff and their sincerity are not in question. In fact, they discussed the projects quite openly and requested suggestions as to how they might modify their approach.

In reviewing these observations, the factors which appear the weakest are in the realm of processes and procedures. The tools used to identify the gifted children could not be considered entirely appropriate or adequate. Instruments for identifying gifted and talented preschool children are not readily available; and therefore, this

cannot be too highly faulted. The separation of the children for purposes of cognitive drill created a competitive situation in which the children could sense a type of "labeling" or differentiation which would naturally create pressure. This pressure probably would increase as they noticed the less successful were being left out. The content or material covered in the hour might be considered inappropriate for these children. The emphasis was placed on a product -- be able to write name, address, birth date -- rather than on developing a thinking process. The teachers were concerned about producing a visible change, and therefore emphasized reproducibility. The methods -- tracing, copying, and reproducing from memory -- lacked creativity. Although some creative dramatics were introduced, the majority of learning experiences did not appear to excite or stimulate the children's curiosity and enthusiasm for experimentation. The students' interests were not pursued, which may have caused some frustration, for even in their regular classes they were allowed choices of fun activities. Although the teachers did not "force" the children to work on the cognitive activities, the teachers expectations and the children's desire to please would influence their participation. The trial class

lasted only four weeks, but had it continued, the teachers would probably have experimented with other techniques and might have experienced more success.

This evaluation, though incomplete, does have implications for future gifted and talented programs. The following recommendations to Matheson are made, based on knowledge of programs for gifted that have been successful:

1. Develop methods of identifying gifted and talented children.
2. Develop a curriculum based on incorporating thinking processes through problem-solving.
3. Provide in-service training for teachers, aides, parents,professional staff, and administrators (in Head Start and kindergarten programs).
4. Create a teacher-centered resource room with an advisory, teacher-consultant.
5. Create a child-centered resource room with a resource teacher.

First, there are many identifiable ways of being gifted and talented. Academic proficiency is merely one. In addition to testing tools, professional, parent, and peer observations can determine many creative and talented children. Teachers should be encouraged to make personal evaluations and judgments, giving the children the benefit of the doubt. (See Appendix for Torrance's "List of Creative Positives" and Williams' "Teacher Checklist for Thinking and Feeling.") Each child should be observed from many perspectives, looking for potential in a variety of areas in addition to cognitive. Informal identification tools need to be created to assist teachers in assessing and determining a multiplicity of talents.

Secondly, curriculum for gifted should encompass broad content areas which allow for flexibility according to the individual needs of the child. Enrichment can be either vertical, which encourages intensive concentration leading to an in-depth understanding of a concept or process; or it can be horizontal, exposing a child to a broad variety of experiences. A combination of approaches is advised, one not to the exclusion of the other. In either case, the product is not as important as the process of learning.

The third recommendation to Matheson is to encourage dynamic, exciting teaching through life experience, problem-solving techniques. (See general recommendations and curriculum ideas on page 49). Students should be allowed to discover for themselves. Utilizing the problem-solving approach, children learn to generalize and to apply their knowledge to new situations. Learning then becomes exciting and meaningful.

Basic skills can be incorporated into other projects without the drill and memorization which the child has difficulty relating to his own experiences.

Techniques for teaching the gifted and talented child could be developed through an in-service training program which operates on an ongoing basis.

While in-service training is an integral part of Head Start, our classroom visits revealed a need for a more continuous, effective, in-depth in-service program which recognizes individual differences among the teaching staff. The teaching staff in the Head Start classes we visited were genuinely interested in their children and had a warm relationship with them; however, we felt they should re-examine the content and appropriateness of the activities

they provided for the children. The team saw a need for a deeper understanding of the possibilities of "real" materials, such as sand, water, clay, blocks, etc.; a need to help teachers know when to intervene with the children, and when not to; how to draw out their interests and capabilities, etc. Through a dynamic in-service training program, teachers can become proficient at creating stimulating, learning environments which encourage productive thinking. Since in-service training is the key to any quality program, an expansion of the preceding points will be made in the general recommendations. (See page 44.)

Because of the size of Matheson's Head Start population and the appropriateness of their facility, it can be recommended that they develop a children's resource room. This resource room should be staffed by a qualified teacher who is well trained in the problem-solving approach to learning. The room could contain equipment, such as listening centers, tape loops, record players, film strip projectors, and a resource library. But more important, the room should provide a stimulating, self-motivating environment. Sand and water, plants, cooking facilities, science equipment, and manipulative math materials should be available for the children's experimentation.

The resource teacher is a facilitator of learning, providing guidance, encouragement, and information. She may bring in community "mentors" who are specialists in areas of concern to the children. Projects can continue for hours, days, or weeks depending on the enthusiasm of the children.

By incorporating provisions for the gifted and talented children, both in the regular classroom and in a resource room, optimum provisions for individualization can be provided. The children will have the advantage of socialization with all of the children,as well as the stimulation of working with equally talented peers. In addition, the in-service will undoubtedly affect the quality of educational experiences offered to all Head Start children.

GRANITE HEAD START PROGRAM

The Head Start Programs in Granite differ from the Matheson School in that the students are located in eight geographic areas. Granite District is the delegate agency and administers the program in two other districts, Jordan and Murray. This limits the potential of staff differentiation and also creates administrative differences.

Although 380 children were recruited for the Granite Head Start Programs, using the OEO poverty guidelines, only 140 were accepted due to severe funding limitations. Using the DDST and the Vineland Social Maturity Scale, only those who scored lowest on the screening tests were admitted to the Head Start Programs.

The team found Mr. Ken McClellan, the Director of the Granite Head Start Programs, to be a dedicated and conscientious administrator. His professional attitude and abilities have been instrumental in the success of these programs. He expressed continued concern for the improvement of programs for exceptional children.

Recommendations to Granite Head Start Programs

Because the Granite Head Start Programs are decentralized, the individual populations are smaller. Certain program and facility provisions for gifted and talented children will necessarily differ from those of the centralized Matheson program. There are some similar recommendations, however, which should be emphasized:

1. Provide in-service training for staff, parents, and administrators.

2. Develop identification tools and a curriculum based on problem-solving techniques.

3. Create resource rooms (both teacher and child) in conjunction with the public school facility which houses the Head Start Program.

Specialized in-service training is essential for Granite Head Start Programs. Although the logistics may vary because of geographic problems, the necessary components previously mentioned remain unchanged. (See page 44.)

Development of identification procedures and curriculum for gifted and talented could be done in a workshop setting. Utilizing community resource persons, university researchers, administrative staff of all Head Start and elementary schools, teachers, aides, paraprofessionals, and parents, a total program could be planned. This is a fertile area for innovation, and many ideas should be considered.

The Granite Head Start Programs have some advantage in that they are located in public school buildings. This may be beneficial for several reasons. First, the elementary programs have access to several different Federal funding sources. It would be possible to develop joint programs with Head Start, kindergarten, and first grade. Secondly, because of the geographic proximity, kindergarten teachers could more easily be included in the in-service. Carry-over would be enhanced. There is also the possibility that gifted Head Start preschoolers could share resource rooms with kindergarten children and benefit from this peer stimulation and interaction. Opportunities for developing cross-age tutor programs are also possible.

The decentralized Head Start Programs are more common in rural areas and have implications for transfer to other

Head Start Programs and preschools, in general. Development of gifted and talented programs in these settings should be carefully analyzed and evaluated.

BELLA VISTA ELEMENTARY SCHOOL

At present, there are very few models for preschool gifted and talented programs. There are numerous approaches being studied in elementary schools, and junior and senior high schools. Some programs focus on academic achievement, while others provide enrichment in specific areas of arts and humanities.

The team visited Bella Vista Elementary School in Salt Lake City, which is considered one model for educating gifted and talented children. This educational program is based on the premise that all students are gifted in at least one area. The key is to look at a multiplicity of talents and identify each individual's areas of strength. Researcher J. P. Guilford, in his "structure-of-intellect" model, identifies 120 specific and separate intellectual skills which are important in thinking processes. (98 have been researched and are measurable.) Current intelligence tests measure only 1/12 of these abilities. Bella Vista School is looking at children from a multiple-talent perspective. Based on the research of Calvin Taylor of the University of Utah, the school approaches curriculum through processes which develop academic, creative, planning, communicating, forecasting, and decision-making talents in

each child, in each classroom, in every grade. Children are encouraged to delve into research, to experiment, express ideas, create projects, and grow through intense involvement in the learning process.

The children appeared to enjoy school and found learning a challenging yet inviting experience.

Is such an approach feasible on the preschool level? The team was pleased to discover that a similar program is in existence at the MiniVale MiniSchool. The project is still in a formative state, but preliminary reports indicate that it shows promise and may hold implications for other preschool programs. The following section was contributed by Mrs. JoAnn B. Seghini, a curriculum consultant, who was instrumental in incorporating the multiple talent program in the MiniVale preschool curriculum.

THE MINIVALE MINISCHOOL

Submitted by Mrs. JoAnn B. Seghini

School History

The MiniVale Minischool was organized and began operation in 1969. There was no other preschool in the area at this time. The school was designed to fit specific needs relating to the community. Specific goals were: (1) to provide a low cost preschool for those students not qualifying for Title I in local school districts; (2) to provide opportunities for Anglo American and Mexican American children and parents to work cooperatively toward common goals so that improved interaction between the two groups would continue into the public school; (3) to give all students enrolled the opportunity to develop Spanish and to identify for all students the concept that the development of a second language was part of the school learning process; (4) to develop a curriculum approach that would recognize the unique talents of children and parents and would provide developmental training for these talents.

The school has been financed through tuition payments, some geared to the family income, and through scholarships. The Midvale United Methodist Church has donated the space used by the school as well as all utilities. Various community groups, labor unions, and private individuals have made

donations to help maintain the school. The school employs two certified teachers and one bilingual teaching aide. Teachers receive a salary of $200.00 per month.

Student population is maintained at a 10 to 1 ratio. Students are referred to the school by their parents, by local children's hospitals and clinics, and by the Jordan School District. This is the only school district referred preschool program in the Salt Lake County.

Curriculum

The school curriculum design has emphasized the research of J.P. Guilford which emphasizes a need to develop convergent, divergent, and evaluative thinking skills in students, and Calvin W. Taylor. Taylor's research emphasized the relationship between certain talents and world of work success. Taylor's talent areas are creativity, planning, decision-making, communications, and forecasting. The school philosophy posits that since these talents and skills relate to total school and adult success, their nurturance is vital to successful school achievement and self-concept development. The school curriculum design further recognized that these talents are developmental in nature and must be approached as such.

Planning

Planning involves elaboration of details and operations; sensitivity to problems; organizing; and adaptability. Activities relating to these areas of development include paper and paste activities; clay activities; group discussions of behaviors and needs; arranging the play house and the play store; easel painting; cooking of puddings, cookies, cakes, tortillas, and applesauce; discussions of field trips; planning for the visits of others to the school; and a Christmas program for parents. Teachers discuss the planning processes they use with the children. Such discussions allow for modeling opportunities as well as for opportunities in which plans and planning may be modified according to student evaluation and suggestions.

Decision-Making

Decision-making involves experimental evaluation, logical evaluation, and judgment. Training in this area is given as children discuss problems and solutions, as they organize during free play activities, and as they work in activity centers such as the home center, manipulation center, construction center, and the art center. Decision-making involving where to go and what to do are big decisions for the four year old.

Creativity

Creativity involves fluency, flexibility, and originality. Many activities in painting, clay work, textured materials, construction, and in responding to rhythm develop these skills. Many other opportunities are given to students to respond and describe in group discussions.

Forecasting

Predicting and forecasting and seeing cause and effect relationships are very difficult for the four year old. Activities aimed at developing this talent are those that discuss and describe coming events, and those that recall and describe past activities. The ability to recall what the group or the individual did yesterday is emphasized during the Fall of the preschool program. Forecasting involves conceptual foresight, penetration, and social awareness.

Communications

Communications involves expressional fluency, associational fluency, word fluency, auditory, memory, associations, deductions, and visual memory. Many short discussions are designed to develop fluency. Auditory memory, and visual memory experiences are planned so that

recall can be trained and discussed. Discussions relating to simple science experiments are examples of activities planned so that future discussions will relate on a memory basis and students can answer what did we use, what happened, what did you see?

Productive Thinking

The productive thinking process involves divergent thinking, convergent thinking, and evaluative thinking. Many discussions and activities relate to all three of these areas. The productive thinking process is used as the approach to all curriculum areas. In addition to this, training in each thinking area is planned.

1) Divergent Thinking, the thinking of many possibilities. Students are encouraged to come up with many ideas, many descriptions, many uses for, and many words that tell about.

2) Convergent Thinking, the process of selection and organization. Training in this area is given when students are asked to select the best way, choose the area in which they wish to play, or place some materials or objects in categories.

Training in this area is done in discussions and in independent planned activities.

3) Evaluative Thinking, reaching decisions and making judgments, deciding what is correct, suitable, and workable in terms of one's goals. Training is given in this area in discussions as groups, and in one-to-one student-teacher interrelationships. Many discussions involving how are things alike and different, what is opposite, and what would be the best way for you are planned.

As can be seen by the abstracted curriculum approach, many discussion activities are used as a means to train thinking and talent development.

Teachers evaluate students'participation, interaction with other students, and teachers, and participation in the various talent training activities. While no formal testing is done, teacher observations are used in two planned parent conferences during the year in which parents are advised as to student strengths, and development. When any problem is noted, direct referral to pupil services of the Jordan School District provides for immediate help for the student and/or the family and follow-through into the elementary school kindergarten program.

Since the program has been in effect, no formal evaluations have occurred. However, several evaluative trends could be assessed. If one child has been in the school program, parents usually return with additional children when they reach the age of four. Almost all parents wish to repeat the school experience for each additional child. Word of mouth recommendations are such that we receive at least 100 applications for 30 school openings each year. Applications are screened on the basis of when they were received and then are balanced according to racial background, language in the home, socio-economic status, and education of parents. It is felt by the school that a mixture of people adds to the strengths of the program and provides children with a wider evaluative base when entering the public school program.

Reports from the Jordan School District Pupil Personnel Services, and from kindergarten and first grade teachers indicate that Minischool trained students are more highly motivated, more ready for development of academic skills, and more capable of relating to the school program than are students who have attended other preschool programs stressing an academic approach, or students who have had no preschool experience. Spanish-speaking parents indicate that those children attending the Minischool are often the first children in the family who have not required remedial reading

assistance by the end of grade one. While these are only indications and not formal evaluations, they do tend to indicate value in the basic goals and programs initiated by the school.

The MiniVale Minischool was organized as a non-profit corporation on a multi-cultural basis. Many other private preschools have since opened in the area. This school is, however, the only one to which medical agencies, and the school district refer parents seeking preschool training for students.

COMMUNITY AND PARENTAL INVOLVEMENT

If special programs are to be implemented for gifted and talented Head Start and other preschoolers, provision must be made to insure transfer and continuum programming in public schools. Because of our concern for extending enrichment, so as not to dissipate the gains, we met with Dr. Donald Thomas, Superintendent of Salt Lake City Public Schools and Dr. T. H. Bell, Superintendent of Granite School District. Our reception was most cordial and the interest in our purpose was high. Both gentlemen clearly understood that such programs require more than good intentions and that an opportunity to improve the education of gifted and talented children necessitated budgetary obligations.

In addition to the Superintendents, interviews were held with Nancy Abraham, Director of the Office of Child Development; Max Jackman, Director of Elementary Education, Granite School District; and Bernice Bernstein, CAP Coordinator. All indicated they felt there was a need to provide enrichment for gifted and talented children. They emphasized the importance of staff development and training, early identification of talents, and parental involvement.

Two meetings were held with parent groups representing two school districts. When asked for their perceptions of a program for gifted and talented, they indicated similar views concerning goals, problems, and importance of special programming. However, they differed in desired implementation procedures.

One group felt strongly that the accelerated child should be segregated into a classroom with children of similar abilities. Such a classroom should remain intact with the same teacher and the same children throughout the program day. The advantages of such a plan would be consistency and sameness with little disruption. The parents in this group did not think that parents of less advanced children would resent this. In fact, none of the parents in this group felt as though their own children were exceptional. Another advantage of separating groups of children would be that the parents also would be able to participate in activity with others of similar problems and interests. (The team, based upon the research that is being conducted and the state of the "art" at the present time, would not advocate this approach to meeting the needs of gifted children). The parents recognized the importance of teacher quality, equipment and in-service training. Their strongest concern, however, was: if kindergarten and other grades in the school system were not going to develop follow through efforts so as not to lose these

children once they left such a preschool experience, no program should be initiated! They firmly felt that it would do more harm than good if these children were not continued to be challenged and advanced to their abilities. The future of the program is as important as the program itself!

The second group of parents interviewed differed in that they felt all children must have the same opportunity and should be in an integrated classroom. Programs should be developed that would allow the teacher to address herself to each child in the classroom in accordance with their level of functioning. They felt that parents and children would object to being singled out as gifted or not gifted. The goals of such a program would be to develop a good self-image for the child and prevent boredom among the children. They identified several problems in instituting a gifted and talented program: 1) need for additional staff; 2) need to recruit volunteers; 3) need for additional equipment.

All community and parental representatives were in agreement that the needs of the gifted child are not adequately being met. They advocate enrichment programs, but with careful consideration of the methods of implementation.

The above comments are those of the parents and not of the team. The team strongly supports parental involvement, but numerous issues have not been addressed in this report.

OVERVIEW OF A GOOD PRESCHOOL PROGRAM FOR GIFTED AND TALENTED

Comprehensive Objectives

A recommended program has many objectives which are periodically reviewed and are constantly adapted to meet the needs of both the program and the individual students. Objectives should include learning in both broad and specific areas. For example, a broad goal might be to develop an appreciation of the beauty of nature, while a specific goal might be to understand how a bean plant grows and develops.

Learning should be through experience and problem-solving. For instance, in the previous example, children could go for nature walks, bird watches, farm visits, a cook-out; they could talk to forest rangers, farmers, environmentalists, etc. They could grow a variety of crops in the classroom and solve problems of irrigation through working in sand and water models. They could think of many ways to beautify their yard or playground.

These activities and goals should have a secondary objective of developing positive attitudes, self-images, and value systems. The child's ideas, no matter how unrealistic they may seem, should be encouraged -- yet he

should also be helped to evaluate and judge his ideas by relating them to consequences and values.

Provision for Pupil Differences

To provide for individual differences both the program and the teachers have to be flexible. Pupil-teacher ratios should be adjustable according to group and individual projects. Aides and parent volunteers can greatly facilitate grouping according to ability and interests. There should be times when the gifted child receives the individual attention and guidance of an interested teacher.

The child who is often placed with others of similar abilities and interests may be challenged and stimulated to perform in accordance with his abilities. Program and teacher flexibility permit idea exchange through continuous ad hoc regrouping. Grouping, however, is merely a facilitative devise. Without accompanying modifications in curriculum, methods, and materials, it is likely to be ineffective.

Cross-age tutors may be utilized to work on projects on an individual basis with the gifted child; or vice versa -- the gifted child may benefit from helping a less talented peer. Resource persons from the community may donate time to work on projects with interested children on a one-to-one or small group basis. Architects, geologists, veterinarians,

nutritionists, biologists, farmers, grocers, construction workers -- the list is unending -- all have an abundance of experience to stimulate bright young minds.

In providing for individual differences, unique characteristics and needs must be appraised and the learning environment and program then adapted to best facilitate the growth of every child to his maximum potential.

Instructional Materials

Instructional materials can be effective in providing additonal incentive to learning. Projectors, tape recorders, record players, maps, globes, manipulative math materials, science equipment, and library books can aid teachers and free them to work with other children. However, it must be emphasized that instructional materials can become "crutches" and often are not even utilized in the many creative ways they might be. Teachers should not be expected to spend many hours making their own materials; however, they should not underestimate the learning inherent in materials which are created by the children themselves.

For example, the language cards in Peabody kits are useful, but it would be much more meaningful to have the children create their own language cards based on their own experiences. If, for instance, a group of children make

pudding, many skills are involved -- fine motor control, sensory discrimination, sequencing of events, etc. The activity can be much more meaningful if when completed the children are allowed to expand upon their experience. They can cut out the cover of the pudding box and milk cartons and paste them on construction paper, while recalling the sequence of events. A plastic spoon can symbolize the act of stirring and eating. The children can recreate the event through pantomine or oral communication. The chart is theirs to keep and is a visualization and symbolization of an experience. The concepts formed are concrete and meaningful. Thought process can be encouraged as well.

Association -- What else pours like milk? What else is the color of chocolate pudding?

Evaluation and Critical Thinking -- Could we make pudding with water instead of milk? Why not? Could we use chocolate milk? What would happen if we used too much milk?

Divergent Thinking -- What else could be added to the pudding to make it better? What if we didn't have a spoon? How could we stir?

Reasoning through Problem-Solving -- We have added too much milk and the pudding is too thin. What can we do to solve the problem? We have six children here, how should we divide the pudding?

In addition, the experience can initiate new realms of exploration, experimentation with consistencies, (What happens if you try making pudding with orange juice?), creating recipes, discussing health and nutrition factors. The possibilities are endless. The key to the learning lies in the ability young children have to extend and clarify their understanding of the world. It is the school's task to provide a variety of materials for manipulation and experimentation, opportunities to investigate the environment, and to assist in the process of problem-solving and conceptualization.

Facility

An exciting learning environment can be provided for children in almost any facility, regardless of the size or shape of rooms or the age of the building. However, an aesthetic component to preschool programming is important. The room itself should be a creative endeavor. It can be a stimulating mileau which invites exploration and a gallery for the future great. Yet, at the same time, a room should

provide an atmosphere of warmth and security which encourages affective exchange and nurtures the "specialness" of each child. The environment should complement the learning process.

Flexible Schedule

The preschool program does not need to be broken into 20 - 30 minute segments. Gifted children become engrossed in activities and will spend hours working on projects, experimenting, manipulating, and creating while learning. Large blocks of time need to be set aside to let these inquisitive children work uninterrupted. It is extremely frustrating to get into a project or start to formulate ideas and questions, only to have to "move on" to the next activity.

The team recognizes that all schools are caught in the dilemma of structured scheduling for management purposes versus non-structured learning environments which necessitate innovative approaches. However, when considering how we can best meet the needs of our gifted and talented children, we should be willing to sacrifice some administrative conveniences.

Qualified Staff

The importance of quality teaching staff for all

students is evident, but for gifted and talented children it is even more important. Teachers need to be excited about learning and be able to communicate this excitement to students. They need to be familiar with child development, principles of learning, development of curriculum and optimum utilization of materials. The teachers of the gifted should be facilitators, encouraging creativity in their children. They should be warm and accepting but also motivating. They should be able to make efficient use of aides, parents, and specialized school personnel. Of prime importance, they should be motivated to continue their own learning through in-service activities, informal consultation, or formal education. It is recognized that there is a paucity of programs at the higher education level which are specifically designed for potential Head Start and gifted and talented teachers.

One of the most essential components of a program for gifted and talented children is staff training and development. Staff development should be considered a continuous ongoing process, that occurs in a variety of ways and settings. It should be "personalized" as well, which means recognizing that each staff member has a different background of experiences, a different teaching style, different needs and strengths, etc. In order to develop the professionalism of teachers and retain their confidence, it is desirable to build on the teaching staff's strengths and present approach

and extend it where it seems promising.

One particularly promising method of implementing a staff training program for those working with gifted and talented children is to establish a resource center for teachers. This center could be located within a school building, should all the Head Start classrooms be in one building such as the Matheson School in Salt Lake City. Given a decentralized program like the Granite School District, the resource center should be geographically convenient to all components. We recognize that there may be capital restraints involved, but the team recommends this alternative as a proven method.

The resource center should have adequate room to store equipment, materials, and supplies, as well as room for workshop space and displays. There should be a place for meetings and office space for the center staff. In designing the center, the environmental qualities should reinforce the purpose of the center.

The center staff will vary in size depending upon the number of teachers and aides served. However, the professional staff members of the center will work not only as resource people, but as consultants or advisors, rather than in a supervisory capacity. The advisor should have demonstrated successful teaching in a preschool or Head

Start and have personal qualities of patience, sensitivity, and understanding.

The advisor will work in the teachers center gathering materials and planning the in-service sessions, courses, and workshops that are appropriate to extend the skills of the Head Start staff in meeting the needs of gifted and talented children. This will include the identification of people, including other teachers, to run courses and workshops and the arrangement for college credit where appropriate.

The advisor will also spend a sizeable amount of time in the Head Start classrooms providing consulting services and support to the teachers. Such assistance will have a great deal of specificity and may include such areas as identification of gifted and talented children, selection and use of materials, room arrangement, classroom management, capturing, extending and sustaining children's interest.

The in-service program at the teachers center will evolve partially from staff needs observed during classroom visitations. There will be a certain amount of lecture and discussion sessions. There should also be opportunity for an exchange of ideas among teachers and teachers-advisor(s).

A major portion of the center program should

recognize that the importance of an experiential basis for understanding applies not only to children but to adults as well. Thus, personal involvement and opportunity to "mess around" with materials and activities are very critical to extending understanding. In addition, this experiential base will deepen understanding of children's emotions. If an adult experiences the frustrations of having to share scare materials, or the amount of time it takes to settle on an activity, or having to stop at an inopportune time, he/she will probably have a deeper understanding of and empathy for children's reactions to such experiences and problems.

The teacher's center and the advisors should play an active role in helping the teacher develop ways to help her children utilize their abilities and create a climate that will support and appeal for him to do so. The advisor works to create the teacher image:

> "The teacher is in charge of the classroom and it is her responsibility to make the environment (well supplied with suitable apparatus and materials) attractive and thought provoking and one in which there is the widest opportunity for the development of the children's creativity and intellectual ability." [7]

The necessity for concrete experiences in developing children's thinking has been thoroughly detailed by Piaget

and others. In preschool and Head Start classrooms it is particularly crucial for teachers to have a understanding of the potential of many varieties of materials. The teacher needs to comprehend the ways in which materials lend themselves to legitimate educational ends.

For example, sand and water. Sand not only lends itself to all kinds of measurement processes (sifting, pouring, weighing) but provides a rich variety of tactile, aesthetic and conceptual experience as well. Wet sand feels and acts differently than dry sand. Dry sand is good for making pictures and designs; wet sand affords the added possibility of three-dimensional construction. Tunnels, bridges, and towers can be made out of wet sand -- but not soggy sand. A child can experiment endlessly with the precise consistency required for building different structures. Whole towns and road systems can be constructed, and these in turn may become the subject of mapping exercises as children learn to represent their three-dimensional sand town on a two-dimensional plane. Different symbols are then drawn on the map to identify such things as houses, gas stations, trees, stop signs, and other objects. In short, the potential for developing quantitative operations and concepts; artistic ability; notions of city planning; rudimentary principles of architecture, engineering, drafting and mapping; and symbolic representational skills -- are all inherent in sand and water.[8]

Even though the teachers center and advisors will be targeting the staff development on meeting the needs of gifted and talented children, the possibility of improving the education of all children is readily apparent.

To reinforce the recommendations, the team strongly suggests to teachers and administrators interested in adopting programs for gifted and talented children that the following two simple but difficult behavior modifications are essential.

One: Teachers must believe and act on the thesis that no one teaches -- we only learn! Consequently, the teacher's role becomes one of a facilitator and a resource finder, not a lecturer or an authoritatian on anything.

Two: The interests of children vary with the individual and, therefore, an environment conducive to accommodate total individualization is a must. It also follows that teachers are individuals,and administrators must allow for those differences if they expect a similar process at the learner's level.

Specifics of Curriculum

Enrichment should provide activities which allow for development of thinking processes:

1) The ability to associate and interrelate concepts.
2) The ability to evaluate facts and arguments critically.
3) The ability to create new ideas and originate new lines of thought.
4) The ability to reason through complex problems.
5) The ability to understand other situations, other times, and other people, to be less bound by one's own peculiar environmental surrounding.

Jerome Brunner stated, "knowing is a process, not a product." The above processes can be integrated into the content areas of the existing curriculum. Activities involving understanding of environment, appreciation of beauty, health and safety, family life, language development, and basic skills can incorporate thought processes. The key to enrichment for the gifted and talented child lies in the quality of the activities and the dynamics of the methodology employed. The activities must be fun, they must excite the child's curiosity and encourage him to pursue ideas, delve into projects, to manipulate and create new and original products. The methods should nurture curiosity and allow for children to learn through discovery.

John W. Gardner, educational innovator, draws the following analogies.

"All too often we are giving our young people cut flowers, when we should be teaching them to grow plants. We are stuffing their heads with products of earlier innovation, rather than teaching them to innovate. We think of the mind as a storehouse to be filled when we should be thinking of it as an instrument to be used." [9]

Teachers might ask themselves, how do we teach preschool children to use their minds as instruments, to innovate and to grow? How do we teach processes to 3, 4, and 5 year olds?

A major consideration is to recognize that the teacher's attitude is crucial to the learning environment. Structure, barriers, and limitations are imposed by the teacher. If he or she is flexible, encouraging, and anticipates success, there is no limit to where the child will lead himself.

The teacher should also be aware of the processes he or she is trying to develop. A conscious effort must be made to encourage productive thinking. By questioning, rather than always supplying the answers, the teacher will provide an environment which allows the children to search

and select ideas, evaluate and draw conclusions.

Experimentation should be encouraged. If the child shows interest, elementary books can provide background and explanations. Give him as much information as he needs. Let him build, glue, weigh, drop, throw, whatever is in the realm of good judgment and safety. And if he wants, let him sit and dream.

Curriculum construction should be developed around individual needs and interests. Particular areas of content cannot be delineated here. The reader is referred to the bibliography in the Appendix.

The following section was submitted by Dr. Calvin Taylor, Professor of Psychology, University of Utah.

Dr. Taylor has been actively involved in research in the area of creativity and has developed both program components and tools for identifying gifted and talented children.

CHARACTERISTICS OF PRESCHOOL CHILDREN

As a preface, we noted that this site visit gave us the opportunity to take a completely fresh look at the total set of inner potentials of students and at the way school programs can be newly designed with these potentials in mind, based upon all the research insights now available to man. Since preschoolers generally have not yet been in any formal school programs, this site visit has provided the possibility of considering a new educational beginning in all respects. The challenge is whether we can take full advantage of this opportunity.

A first caution is that we should try to avoid any unjustified assumptions at this stage. That is, we should not have any fixed ideas from the past as to the way that things really are and therefore the way that things must continue to be for children in school programs. The focus need not remain the way it has been nor must we restrict our thinking and approaches to fit in with the way elementary and secondary schools and colleges and universities now are.

On the one hand, precious little is firmly known through research about young children and about what is best educationally for them at the preschool levels to be very

confident about what should be done. Yet on the other hand, enough is known through basic research and classroom implementation of that research in elementary schools to know that the time is ripe for radically different educational programs at all levels. Such programs show every promise of yielding better outcomes on a wide range of relevant old and new accountability measures, so much so that a major revolution in education is now possible. It is ready to occur either within or outside the present educational establishments, depending upon their abilities to change.

Our viewpoint is that we can now try to design school programs to fit the kids rather than having the kids continue to fit the schools (with little or no marked change in the schools). The better the job that is done in the preschools to make them fit the kids, the more the kindergartens and the elementary schools will have to adjust and become up-to-date to also fit the kids. This viewpoint can have radically different effects from those of traditional thinking namely, that the preschools should be designed essentially to prepare the youngsters to fit most efficiently into the present school system and to adjust to it successfully, regardless of whether it is as up-to-date and as sound as it might now be.

In newly designing or in redesigning schools to fit the kids, we need as much insight as possible into the

nature of the multiplicity of potentials in children and the degree to which they possess each of these potentials. This means that we must be aware of the entire complex of potential resources in children and should start to learn to identify each of these potentials to yield a pattern or profile of potentials in each child. At this early age, we can try to make many of these potential inner resources start to come to the surface and become more and more functional and available for use. These potentials will then be developing and becoming differentiated so that they can be separately noticed and recognized. Some beginnings can also occur toward combining some of these different inner processes so that they work together in more complex activities.

Since evidence is growing strongly that knowledge-focused education is not very effective, it may be fortunate that is less possible to make preschool as knowledge-focused as has occurred in some later elementary grades and in most secondary schools and colleges. With these young children it is not easy to start with a highly knowledge-focused approach. Instead, these earliest educational programs almost have to be student focused, which is proving to be a superior approach to the knowledge-focused one against almost all kinds of criterion yardsticks (including but not restricted to standardized achievement tests) that have been held up to evaluate such programs.

As we see it, the task is not to prepare preschool students for typical schools now available (some of which are strong candidates for obsolence and replacement) but to do much better than that. The target can be to prepare them for the best elementary schools now available or even better than that, to prepare them for the best schools that could now possibly be available. If we took those schools that are currently best and then did all we now could to make them even better according to the latest scientific know-how and the best state of the art, then we would have as the target the best possible programs that are well designed to identify and develop all the important human resources in students. This is the problem of the moving target, the problem of continually expanding and improving the criterion measurements of outcomes of education.

At the early childhood level it is possible to look backward and say with some pride how much man already knows. Or we can look forward to the unknowns and realize how precious little we already know and how much we might want to know to have the insights needed to plan and handle well all the problems faced in early childhood education.

One tendency in a situation like this is to focus upon the so-called knowns and current practices and thereby show how authoritative one can be and "tell them how it is and how it should be." Since so much of education tends to deal

only with the knowns in classrooms and to converge to the right answer, people who are products of such a system will tend to converge and thereby to narrow down and crystallize their thinking in order to give answers in a situation like this one. They thus may reduce the options and the magnitude of the opportunities through their own "reduction and contractual thinking." We suspect, however, that the wise move is to keep all the options as open as possible, to admit rather fully how little is really yet known, and to be like the highly creatives who tend to resist premature crystalization. Instead we should tolerate ambiguities at this time by observing and elaborating and expanding the vision of what might be possible in this fresh start approach with students who have not yet gone to school.

At the pioneering stages this would include taking a research-oriented approach toward getting a variety of things tried in many different classrooms and programs rather than focusing down too much toward what has always been done in education and thereby restricting our thinking and actions to a much narrower band than is now possible. We should be looking for diversifying the educational approaches, to have a multiplicity of alternatives so that we will more likely span or bracket all the possibilities rather than overlook and miss some that, upon hindsight, might embarassingly be found to be among the most important ones.

This fresh start enables one to look to basic research for all we know about human beings -- adults as well as children. Also we can examine the current classroom practices to find the best at any level, retooling those working at older ages to make them suitable for use at the more budding, preschool level.

We site visited some very good preschools whose leaders showed an interest in having their classes become even better. They were well aware that such possibilities now exist and were willing to have research accompany their present efforts and help their programs improve further. Their pretesting was certainly not all encompassing and may be having some narrowing and other biasing effects as well as some good effects on their program. Their school activities were certainly broader and more encompassing in nature than were their pretests.

In terms of the multiple potentialities that could be measured in kids, the present selection techniques are far too limited to be leaned upon very heavily at this stage. Instead, it might be wiser not to preselect nor to train them in too narrow or too biased ways. The challenge as seen by us is initially to complicate matters by amplifying on student potentials, thus counteracting the more typical tendency to converge and focus upon a few potentials.

Both pretests and classroom activities can be expanded and elaborated and accompanied by sound scientific research, including well designed and constructed instruments for measuring the characteristics and performances displayed in these classroom activities. Then in samples of representative situations, there should be open competition between all the pretests and also between the variety of classroom activities to determine which are the most effective. This should not occur until enough alternatives exist in the classroom activities to avoid prematurely narrowing down and eliminating relevent activities. That is, the horizons should continually widen by considering other potential activities and thereby counteract tendencies to crystalize the classroom activities too narrowly and too rigidly, not only too soon but ever.

We believe strongly in measurement and in a multiplicity of important measures, both existing and sorely needing to be constructed. Yet the best way to attain this may be to have an "open plan selection program" in vital experiment settings and then study intensively and learn how to measure a multiplicity of potentials in chidren during the comparatively lenghty time available, day after day throughout the entire school year, in classroom activities.

To foster a systematic diversity of classroom activities we suggest a combination approach which focuses primarily upon students but also upon knowledge. Our two dimensional

model can be useful with appropriate modifications. It was produced initially for our USOE supported Theory of Education project. A modified version is shown in Figure 1 which could be modified further to be more appropriate for early childhood.

At this stage there should be a multiplicity of opportunities for free expression plus continued fostering of both independent and dependent characteristics. That is, the development of individuality and helping children to work for others and with others will better prepare them for both leadership and followership roles. In addition to standardized achievement tests, the yardsticks that have been used to date in elementary schools or that could be held up in preschools include listening creatively, reading creatively, imitating and also expressing oneself creatively, fluency of ideas, fluency of expressions, fluency and richness of associations, originality, various flexibilities, and quantity and quality of one's own productivity. We have also used criterion tests of planning, forecasting, and decision making in elementary schools as well as measures of independent development, enjoyment of school, reinforcement of self-concept, individualization of instructions,

career development, classroom participation, democratic classroom control, and participation in multiple talent teaching. In addition, we believe that measures of humanizing, involving, enlivening, groupizing (learning to work with others), and valuing others should soon also be built. We have found that teaching for multiple talents tends to increase scores in all these above measures and helps enable students to function as fully and effectively as they are ideally ready and able to function (See the Multiple Talent Totem Poles).

Figure 1

TALENT PROCESSES -- POTENTIAL INNER RESOURCES

CONTENT	Intellectual Resources							Non-Intellectual Resources							Physical Resources							
	Academic Talents	Creative Talents	Planning Talents	Communicating Talents	Forecasting Talents	Decision-Making Talents	Other Intellectual Talents	Intuitive	Sensitivities	Emotions and Feelings	Involvement, Motivation	Other Affective Resources	Temperament Resources	Personality Resources	Rhythm	Dance	Speed and Quickness	Strength and Endurance	Specific Games & Skills	Other Sensory-Motor Acts.	Dexterities	Eye-Hand Coordination
Language Arts																						
Social Studies																						
Humanities																						
Arts																						
Biological Sciences																						
Physical Sciences																						
Mathematics																						
Various Craftsmanships																						
Health and Phys. Educ.																						
Other Subjects																						

Initially, Figure 1 was not built with preschool in mind, so it is subject to additions and modifications by those most expert in early childhood education. So far, the basic research studies on the intellectual resources have been the most complete available and ready for implementation. Consequently, our teaching for talents (the Multiple Talent Teaching Approach) has been focused essentially on numerous intellectual talent resources, the specified set of which can be expanded or modified to fit the earlier childhood stages. Nonetheless, it has been so promising that it should be retooled and applied first as a most sound broad approach for use in preschool programs.

Next, from many possible sources, including basic research and best existing classroom programs, we can learn how to build activities which will cultivate non-intellectual resources and physical resources in children. No doubt, many early childhood workers could immediately produce lengthy sets of appropriate categories under both non-intellectual and physical resources.

In Multiple Talent Teaching, we have been pleasantly surprised, however, to find that non-intellectual resources of many kinds do emerge as accompaniments to the intellectual talent processes which enable the talents to function more fully and effectively. In other words, we are getting the

development of various non-intellectual resources, including much greater motivation and involvement, as spin-offs or by-products to our teaching for multiple talents. In a way the same could be said about creative dance programs by Virginia Tanner and by others with which we are acquainted. For example, a great deal of creative dance is clearly in the head as a high-level innovative talent process with rich affective accompaniments from the person's emotional system. These inner resources, which are functioning so well in the best creative dancing, underlie the outer dancing expressions displayed through the hands, legs, feet, and body.

Changes can likewise be made in the knowledge (or content) rows to be more suitable for preschools. New measures can be constructed for both the human resources functioning and the knowledge and classroom skills acquired and displayed in each cell -- and these can be combined down the columns as human resource measures and along the rows as achievement tests. In this way, the pertinent and displayable characteristics of these young children can become at least crudely measurable in classrooms. Also many, if not all of the classroom activities and techniques can potentially and eventually be retoolable to be suitable for use as pretest selectors for early childhood education programs.

As a step in this direction, the multiple talent

activities now functioning in classrooms in elementary schools, such as Bella Vista or at the Talents Unlimited Project in Mobile or Project Advance in West Des Moines, can be retooled to work as well as possible in the preschool situations. Then preschools will start out broadly to be student-focused by turning on and starting to develop a wide band of the intellectual, non-intellectual, and physical resources.

This broadening approach runs counter to some scientific and educational and organizational thinking which tells the students to delimit their problem by turning a total complicated problem into a problem of simplicity through eliminating or controlling all variables except two, the dependent variable and the independent one. In other words, we feel that tendencies to limit the almost unlimited potential resources in students can perform a great disservice. The task is <u>not</u> to restrict opportunities and curtail the cultivation of the almost unlimited human resources (which is very indefensible at this time). Any restrictions of sound outputs of students and any curtailments of opportunities open to students is unsound and should be exposed and stamped out soon -- at this early stage before it gets too strongly imprinted and stamped in with too much weight. Any actions which limit the unlimited horizons and the unlimited opportunities need to be severely challenged promptly nowadays. The soundly new things in education

should not be at the mercy of all the old things. There is no need for the traditional patterns in education (including in higher education) to have undue weight in this fresh start opportunity, beginning with young children.

This sound precedent will not only find promise and value in every child but will also set the stage for all later schooling to be more broad-banded and up to date with this multiple potential approach in classrooms in all levels of education. A major R&D implementation effort (including broad training and measurement approaches) at representative settings like the Matheson school and one smaller preschool could lead the way toward a revolution in education from early childhood on. The total improvement could be priceless to our nation and to its future generations and would lead the world in valuing and cultivating more effectively the total potential resources in all its human beings.

SUMMARY -- FOR EDUCATORS

A paraphrase of James Aggrey's, "The Parable of the Eagle":

"Once upon a time, while walking through the forest, a certain man found a young eagle. He took it home and put it in his barnyard where it soon learned to eat chicken feed and to behave as chickens behave.

One day, a naturalist who was passing by inquired of the owner why it was that an eagle, the king of all birds, should be confined to live in the barnyard with the chickens.

'Since I have given it chicken feed and trained it to be a chicken, it has never learned to fly,' replied the owner. 'It behaves as chickens behave, so it is no longer an eagle.'

'Still,' insisted the naturalist, 'it has the heart of an eagle and can surely be taught to fly.'

After talking it over, the two men agreed to find out whether this was possible. Gently the naturalist took the eagle in his arms and said, 'You belong to the sky and not to the earth. Stretch forth your wings and fly.'

The eagle, however, was confused; he did not know who he was, and, seeing the chickens eating their food, he jumped down to be with them again.

Undismayed, the naturalist took the eagle on the following day, up on the roof of the house, and urged him again, saying, 'You are an eagle. Stretch forth your wings and fly.' But the eagle was afraid of his unknown self and world and jumped down once more for the chicken food.

On the third day, the naturalist rose early and took the eagle out of the barnyard to a high mountain. There, he held the king of birds high above him and encouraged him again, saying, 'You are an eagle. You belong to the sky as well as to the earth. Stretch forth your wings now, and fly.'

The eagle looked around, back towards the barnyard and up to the sky. Still he did not fly. Then the naturalist lifted him straight towards the sun and it happened that the eagle began to tremble, slowly he stretched his wings. At last, with a triumphant cry, he soared away into the heavens.

It may be that the eagle still remembers the chickens with nostalgia; it may even be that he occasionally revisits the barnyard. But as far as anyone knows, he has never returned to lead the life of a chicken. He was an eagle though he had been kept and tamed as a chicken."

One can use the parable as an analogy of the problem of our gifted children. Gifted children, to reach their potential, need help; they need a positive self-image; they need to be challenged, encouraged, and made aware that security, comfortableness, and mediocrity are virtues only for those without vision.

The real lesson of the parable is that nothing will happen unless teachers identify unique individuals; then with calculated efforts they can encourage an escape from the mundane chicken yard.

FOOTNOTES

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APPENDIX

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The following is from "Indicators of Creative Talent Among Disadvantaged Children" by E. P. Torrance. The Gifted Child Quarterly, Spring 1973, pp. 4-8.

CHECKLIST OF CREATIVE POSITIVES

1. Ability to express feelings and emotions

-- Expresses feelings and emotions facially
-- Expresses feelings and emotions by body gestures
-- Expresses feelings and emotions in writing
-- Expresses feelings and emotions in discussions
-- Expresses feelings and emotions in role playing
-- Expresses feelings and emotions in dramatics
-- Expresses feelings and emotions in dance and/or creative movement
-- Expresses feelings and emotions in visual art media
-- Expresses feelings and emotions in music and rhythm

2. Ability to improvise with commonplace materials

-- Makes toys from commonplace materials
-- Uses commonplace materials to modify toys
-- Makes games from commonplace materials
-- Uses commonplace materials for home purposes
-- Uses commonplace materials for school purposes
-- Uses commonplace materials in "inventions"
-- Uses commonplace materials in role playing and creative dramatics

3. Articulateness in role playing and storytelling

-- Role playing becomes very involved and life-like
-- Expresses ideas in role playing
-- Responds at empathic level toward others in role playing
-- His story telling arouses interest
-- Becomes very involved in storytelling
-- Engages in fantasy in storytelling

4. Enjoyment of and ability in visual art

-- Experiences real joy in drawing
-- Experiences real joy in painting
-- Experiences real joy in sculpture
-- Experiences real joy in other visual art activities
-- Understands subject matter by "drawing it" (illustrating stories, illustrating history, drawing biological objects, making maps, etc.)
-- Communicates skillfully through drawing
-- Communicates skillfully through painting
-- Communicates skillfully through sculpture
-- Makes others see something new through visual arts

5. Enjoyment of and ability in creative movement, dance, dramatics, etc.

-- Experiences deep enjoyment in dance and/or creative movement
-- Experiences deep enjoyment in creative dramatics
-- Becomes completely absorbed in dance and creative movement
-- Becomes completely involved in creative dramatics
-- Can interpret songs, poems, stories through creative movement
-- Can elaborate ideas through creative movement and/or dance
-- Movement facilitates learning and understanding ideas, events, concepts
-- Creative dramatics facilitates learning and understanding ideas, events, concepts
-- Creates own style of movement, dance, etc.

6. Enjoyment of and ability in music, rhythm, etc.

-- Writes, moves, works, walks with rhythm
-- Rhythm facilitates learning of skills
-- Rhythm facilitates learning and understanding ideas, events, concepts
-- Creates songs
-- Creates music
-- Can interpret ideas, events, feelings, etc. through rhythm
-- Can interpret ideas, events, feelings, etc. through music

7. Expressive speech

-- Speech is colorful
-- Speech is picturesque (suggests a picture, etc.)
-- Speech includes powerful analogies, metaphors, etc.
-- Speech is vivid (lively, intense, penetrating, etc.)
-- Invents words to express concepts new to him

8. Fluency and flexibility in non-verbal media

-- Produces large number of different ideas through drawings
-- Produces large number of ideas with common objects
-- Produces large number of ideas through creative movement/dance
-- Produces large number of ideas through music and rhythm
-- Produces large number of ideas in play situations
-- Produces large variety of ideas through drawings
-- Produces large variety of ideas through dance
-- Produces large variety of ideas through music

9. Enjoyment of and skills in small group activities, problem-solving, etc.

-- Work in a small group facilitates learning
-- Tries harder in small groups
-- Produces ideas in small groups
-- Becomes more alive in small groups
-- Skillful in group organization
-- Highly aware of feelings and skills of others in small groups
-- Supports other members of small group, high group loyalty and involvement

10. Responsiveness to the concrete

-- Ideas start flowing when concrete objects and materials are involved
-- Uses concrete objects and materials to generate ideas, solutions, etc.

11. Responsiveness to the kinesthetic

-- Movement stimulates ideas
-- Movement communicates ideas
-- Skillful in interpreting meaning of movement

12. Expressiveness of gestures, "body language," etc.

-- Expresses ideas powerfully through gestures, "body language"
-- Body says the things his words do not say

13. Humor

-- Portrays comical, funny, amusing in writing
-- Portrays comical, funny, amusing in role playing
-- Portrays comical, funny, amusing in drawing
-- Makes humorous cartoon strips (original)
-- Portrays comical, funny, amusing in dramatics
-- Makes people laugh in games
-- Makes up humorous jokes
-- Makes people laugh (not make fun of) in discussion
-- Tells his experiences with humor

14. Richness of imagery in informal language

-- Makes others see pictures when he tells a story or relates personal experiences
-- Makes people see a picture when he describes something in a conversation
-- Makes people see pictures in role playing and dramatics

15. Originality of ideas in problem-solving

-- Produces solutions that others do not think of
-- Produces solutions when no one else can
-- Solutions are unusual, unconventional
-- Stories have unusual endings
-- Stories have unusual plots
-- Comes up with inventions to solve problems
-- Innovates with commonplace materials to produce solutions to day-to-day problems

16. Problem-centeredness

-- Doesn't give up, keeps trying to solve problems
-- Shows concern and tries to solve problems of others
-- Shows concern about the problems of others and tries to solve them
-- Is hard to distract when he is concerned about a problem
-- Keeps seeing relevance of new information to problems of group

17. Emotional responsiveness

-- Responds emotionally to stories, events, needs of group members, etc.

18. Quickness of warm-up

-- Always ready to go; may get tired of waiting and become "turned off"

A TOTAL CREATIVITY PROGRAM FOR INDIVIDUALIZING AND HUMANIZING THE LEARNING PROCESS

by

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This program is designed to give practical help to teachers who want to learn how to individualize and humanize their classrooms. Thinking and feeling behaviors are combined as the teacher and student work together to develop the student's creative potential. It is a product which has grown out of the National Schools Project and it has been field tested by groups of teachers in different educational settings. The package takes a multimedia approach. It consists of three groups of materials -- one for trainers of teachers, one for participants in the program, and another for use in the classroom. The entire package presents a practical approach to curriculum design, its basic purpose is to offer useful, concrete activities for fostering and cultivating creativity through the basic disciplines.

LIST OF PUPIL BEHAVIORS

THINKING BEHAVIORS

-- FLUENT THINKING

The child who thinks of the most.

-- FLEXIBLE THINKING

The child who takes different approaches.

-- ORIGINAL THINKING

The child who thinks of novel or unique ways.

-- ELABORATIVE THINKING

The child who adds on to ideas or things.

FEELING BEHAVIORS

-- RISK-TAKING

The child who has courage.

-- COMPLEXITY

The child who seeks challenge.

-- CURIOSITY

The child who is inquisitive.

-- IMAGINATION

The child who feels about things that have never happened.

TEACHER'S CHECKLIST

Pupils' Names	Thinking Behaviors				Feeling Behaviors				Total
	Fluency	Flexibility	Originality	Elaboration	Risk-Taking	Complexity	Curiosity	Imagination	
Mary A.				I					1
Paul C.	~~IIII~~		I			III	II		11
Sue E.			III		I	II	~~IIIII~~		12
Jane G.				III				I	4
Rick J.	II	III					II		7
Bill M.	I							I	2
Robert P.	~~IIII~~				II			~~IIIII~~	13
Joan R.	II	III	IIII		II		III	II	16
Edward T.	II			I			II		5

The following bibliography was obtained from a computer search of Exceptional Child Abstracts (ECEA) and/or ERIC-CIJE files. The search was conducted by the CEC Information Center on Exceptional Children, 1920 Association Drive, Reston, Virginia. Specific abstract information can be obtained from the Center.

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